# 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

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## Addressing "Vienna issues": the Comprehensive Nuclear-Test-Ban Treaty, compliance and verification, export controls, cooperation in the peaceful uses of nuclear energy, nuclear safety, nuclear security and withdrawal from the Non-Proliferation Treaty

### Working paper submitted by Australia, Austria, Canada, Denmark, Finland, Hungary, Ireland, the Netherlands, New Zealand, Norway and Sweden ("the Vienna Group of Ten")

1. The Vienna Group of Ten reconfirms its full commitment to the Treaty on the Non-Proliferation of Nuclear Weapons (the Treaty). The Treaty is the cornerstone of the international disarmament and non-proliferation regime and fundamentally contributes to international peace and security. The Vienna Group of Ten places great importance on the universalization of the Treaty, and encourages all States that have not acceded to the Treaty to do so as soon as possible.

2. The Treaty plays a unique role in providing a framework that fosters international confidence and cooperation in the peaceful uses of nuclear energy. By aiming to ensure that nuclear materials, equipment, technology and facilities do not contribute to nuclear proliferation, the Treaty creates the necessary basis for nuclear cooperation and transfer.

3. Slow progress on the implementation of nuclear disarmament commitments since the 2010 Review Conference, the lack of universality and a number of pressing non-compliance challenges have had the net effect of undermining confidence in the Treaty itself. That does not mean that, 20 years after it was extended indefinitely, the Treaty is any less relevant than when it was agreed. On the contrary, full implementation of the Treaty remains essential to facilitating the use of nuclear applications in a growing range of areas. Over 140 International Atomic Energy Agency (IAEA) member States have sought or received assistance from IAEA to that end.

4. The three pillars of the Treaty remain equally important and mutually reinforcing. The Vienna Group of Ten calls on all States, including those outside of the Treaty, to redouble their efforts towards the fundamental goals of the Treaty, including full and irreversible disarmament.

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5. The present working paper aims to ensure that so-called "Vienna issues", listed in the title of the paper, are given appropriate weight during the 2015 Review Conference. In that regard, there has been some solid progress in taking forward the 64-point Action Plan from the 2010 Review Conference, particularly regarding high-level focus and practical steps on nuclear safety and security. The 2015 Review Conference needs to maintain forward movement on those and other "Vienna issues".

6. We urge participants at the 2015 Review Conference to keep that in mind during their deliberations and hope that discussions will be conducted in the spirit of cooperation towards strengthening the Treaty. In that context, the Vienna Group of Ten offers the following recommendations:

On the Comprehensive Nuclear-Test-Ban Treaty, that the 2015 Review Conference:

(1) *Affirm* that the Nuclear-Test-Ban Treaty is vital to the Non-Proliferation Treaty and constitutes a core element of the nuclear disarmament and nuclear non-proliferation regime;

(2) *Underline* that the entry into force of the Nuclear-Test-Ban Treaty is of the utmost urgency as it provides the global community a permanent, non-discriminatory and legally binding commitment to end nuclear weapon testing and all other nuclear explosions;

(3) *Urge* all States that have not yet done so to sign and/or ratify the Nuclear-Test-Ban Treaty without delay, in particular those remaining eight Annex 2 States necessary for the Nuclear-Test-Ban Treaty's entry into force;

(4) *Urge* all States to refrain from any action that would defeat the object and purpose of the Nuclear-Test-Ban Treaty, pending its entry into force;

(5) *Recognize* that the continued development of the Nuclear-Test-Ban Treaty's verification regime is vital to its effectiveness and to maintaining the norm that existing signatures and ratifications establish against nuclear testing;

(6) *Urge* State signatories to support the work of the Provisional Technical Secretariat to ensure that the technical aspects of the work of the Nuclear-Test-Ban Treaty Organization continue to move ahead, so the verification regime will be capable of meeting the verification requirements of the Nuclear-Test-Ban Treaty at its entry into force, and to sustain political progress towards its entry into force.

On compliance and verification, that the 2015 Review Conference:

(7) *Underline* the importance of building and maintaining confidence in the peaceful nature of nuclear activities in non-nuclear-weapon States;

(8) *Call* for the universal application of IAEA safeguards and call on all States to submit all their relevant materials and activities, both current and future, to IAEA safeguards;

(9) *Urge* those States parties that have not yet done so to conclude a comprehensive safeguards agreement;

(10) *Recognize* the additional protocol as an integral part of the IAEA safeguards system, affirm that a comprehensive safeguards agreement, together with the additional protocol, represents the verification standard pursuant to article III (1)

of the Treaty, and urge all States parties that have not yet done so to conclude and bring into force the additional protocol as soon as possible;

(11) *Urge* all States to cooperate fully with IAEA in implementing safeguards agreements and in expeditiously addressing anomalies, inconsistencies and questions identified by IAEA in order to assist IAEA in drawing its annual safeguards conclusions with respect to the correctness and completeness of States' declarations;

(12) *Call* on all States currently in non-compliance with their Treaty safeguards obligations to remedy such non-compliance forthwith and move promptly to return to compliance with all of their Treaty safeguards obligations;

(13) *Note* that, in order to draw credible safeguards conclusions, IAEA needs the full cooperation of States in the implementation of their safeguards agreements, including by receiving early design information;

(14) *Welcome* the efforts of IAEA to apply the State-level Concept to all States with a safeguards agreement in force, as part of the continuing evolution of safeguards implementation necessary to increasing its effectiveness and efficiency.

On export controls, that the 2015 Review Conference:

(15) *Reaffirm* that all States parties are responsible for ensuring that their nuclear-related exports do not directly or indirectly assist in the development of nuclear weapons or other nuclear explosive devices and that such exports are conducted in full conformity with the objectives and undertakings of the Treaty;

(16) *Urge* all States to apply in their export control regimes the understandings of the Zangger Committee, which are designed to implement the obligations under article III of the Treaty, and to further make use of multilaterally negotiated and agreed upon export control guidelines and understandings;

(17) *Stress* that effective export controls are central to enabling cooperation in the peaceful uses of nuclear energy;

(18) *Reaffirm* that the list of items triggering IAEA safeguards and the procedures for implementing control of those items, in accordance with article III, paragraph 2, of the Treaty, should be reviewed from time to time to take into account advances in technology, the proliferation sensitivity and changes in procurement practices;

(19) *Welcome* States parties' increasing adherence to export controls, encourage further progress in that regard and call on all States parties to examine opportunities offered by the increasing adherence to export controls with a view to strengthening the global nuclear disarmament and non-proliferation regime;

(20) *Reaffirm* that new supply arrangements for the transfer of source or special fissionable material or equipment or material especially designed or prepared for the processing, use or production of special fissionable material to non-nuclear-weapon States should require, as a necessary precondition, acceptance of full-scope IAEA safeguards and urge all States to require an additional protocol based on the model INFCIRC/540 (Corrected) as a condition for new supply arrangements.

On cooperation in the peaceful uses of nuclear energy, that the 2015 Review Conference:

(21) *Recognize* the benefits that can be obtained from the peaceful applications of nuclear energy and nuclear techniques and acknowledge the article IV right of all States parties to undertake research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I, II and III of the Treaty;

(22) *Stress* that adherence to, and compliance with, the non-proliferation and verification requirements of the Treaty is a precondition for cooperation in that field, and that the use of nuclear energy must also be accompanied by adherence to the highest levels of safety and security, including at all stages of the nuclear fuel cycle;

(23) *Underline* the essential role of IAEA in assisting developing States parties in engaging in the peaceful applications of nuclear energy and nuclear techniques, including through its Technical Cooperation Programme, as well as the further development of instruments, standards and codes of conduct to ensure human safety and environmental protection.

On nuclear safety, that the 2015 Review Conference:

(24) *Emphasize* the importance for States and international organizations to continue to take active steps to enhance safety measures for all fuel cycle activities;

(25) *Encourage* all States to become party to the Convention on Nuclear Safety and for Contracting Parties to fulfil their obligations under the Convention and to implement the principles of the Vienna Declaration to prevent accidents, mitigate possible releases of radionuclides and avoid early or large radioactive releases;

(26) *Encourage* all States to become party to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management and for Contracting Parties to fulfil their obligations under the Joint Convention;

(27) *Underline* the central role of IAEA in enhancing the global nuclear safety regime, and in sharing and encouraging the application of lessons learned from the accident at the Fukushima Daiichi Nuclear Power Station and emphasize the importance of States continuing to take active steps to fulfil the actions contained in the IAEA Action Plan on Nuclear Safety as a matter of priority and to identify further scope for enhancing nuclear safety;

(28) *Encourage* all States to address regulatory effectiveness and transparency, operational safety, design safety and emergency preparedness and response by hosting IAEA review missions on a regular basis, as provided for by the IAEA Action Plan on Nuclear Safety, and to share publicly the outcomes in order to strengthen further nuclear safety worldwide;

(29) *Emphasize* the need for States embarking on nuclear energy programmes to develop an adequate national technical, human and regulatory infrastructure to ensure safety and security for all fuel cycle activities in line with international standards, guidelines and recommendations at a very early stage of the process;

(30) *Emphasize* the importance for all States, in particular those with nuclear fuel cycle activities, to become parties to all conventions and agreements relevant to safety, and support the further development, as necessary, of legally binding instruments to ensure a better global safety and security framework;

(31) *Welcome* international cooperation efforts to enhance the safety of the transportation of radioactive material, including through the use by some States of best practice guidelines for systematic communications in relation to the safe maritime transport of radioactive material.

On nuclear security, that the 2015 Review Conference:

(32) *Underline* the paramount importance of effective physical protection of all nuclear and other radioactive materials, including those materials used in nuclear weapons, and nuclear facilities and the need for all States to maintain the highest standards of such physical protection;

(33) *Call* on States that possess nuclear weapons to undertake voluntary measures to increase transparency and confidence in the effectiveness of security for military nuclear materials;

(34) *Affirm* the central role of IAEA in strengthening the nuclear security framework globally and in coordinating international activities in the field of nuclear energy;

(35) *Call* for the acceleration of efforts to develop and implement a fully effective global nuclear security framework based on prevention, detection and response;

(36) *Urge* States that have not yet done so to become party to the Convention on the Physical Protection of Nuclear Material and its 2005 Amendment as soon as possible and encourage all parties to the Convention to act in accordance with the objectives and purposes of the Amendment until such time as it enters into force;

(37) *Urge* all States that have not yet done so to sign and ratify the International Convention for the Suppression of Acts of Nuclear Terrorism as soon as possible;

(38) *Encourage* States to subscribe to the Joint Statement on Strengthening Nuclear Security Implementation (INFCIRC/869) and to meet the essential elements of a nuclear security regime and to commit to the effective and sustainable implementation of the principles therein;

(39) *Encourage* States to host IAEA advisory services relevant to nuclear security on a periodic basis, and establish and implement with IAEA, as appropriate, Integrated Nuclear Security Support Plans in order to improve nuclear security at the national level and as a contribution to strengthening the global nuclear security framework. States are also encouraged to share experience gained in improving their nuclear security;

(40) *Note* with serious concern the illicit trafficking in nuclear and other radioactive material, equipment and technology;

(41) *Recognize* the increased need for all States to reinforce their efforts on improving existing control and cooperation mechanisms, including through membership of the IAEA Incident and Trafficking Database;

(42) *Encourage* States concerned to further minimize highly enriched uranium stocks and to further minimize their use, including by converting radioisotope production to low-enriched uranium fuel and targets or by using other non-highly enriched uranium technologies, taking into account the need for an assured and reliable supply of medical isotopes;

(43) *Welcome* contributions by the United Nations and INTERPOL (International Criminal Police Organization) to strengthening global nuclear security;

(44) *Encourage* States to keep their stockpiles of separated plutonium to the minimum consistent with their national requirements;

(45) *Welcome* nuclear security related initiatives, such as the Nuclear Security Summit, the Global Initiative to Combat Nuclear Terrorism, the Proliferation Security Initiative and the Global Partnership against the Spread of Weapons and Materials of Mass Destruction and encourage participating States to follow up their outcomes effectively.

On withdrawal from the Treaty, that the 2015 Review Conference:

(46) *Affirm* the unique role played by the Treaty in providing a framework that fosters international confidence and cooperation in the peaceful uses of nuclear energy;

(47) *Note* that withdrawal from the Treaty carries inherent risks to non-proliferation and could constitute a threat to international peace and security;

(48) *Agree* that exercise of the right of withdrawal under article X of the Treaty be governed by the following principles:

(a) Withdrawal is a right for States parties governed by article X of the Treaty, which sets out that the right can only be exercised in the face of extraordinary events related to the subject matter of the Treaty, can only be exercised following notice to all other States parties and the Security Council three months in advance, and that such notice must include a statement of the extraordinary events the withdrawing State regards as having jeopardized its supreme interest;

(b) The right is governed by international law; the withdrawing State is still liable for violations of the Treaty perpetrated prior to withdrawal;

(c) Withdrawal should not affect any right, obligation or legal situation between the withdrawing State and each of the other States parties created through implementation of the Treaty prior to withdrawal, including those related to IAEA safeguards;

(d) Every diplomatic effort should be made to persuade the withdrawing State to reconsider its decision, including by addressing its legitimate security needs and encouraging regional diplomatic initiatives;

(e) All nuclear materials, equipment and technology acquired by a State party under article IV prior to withdrawal must remain under IAEA safeguards or fall-back safeguards even after withdrawal;

(f) Nuclear-supplying States should be encouraged to exercise their right, in accordance with international law and their national legislation, to incorporate

dismantling and/or return clauses or fall-back safeguards in the event of withdrawal in contracts or other arrangements concluded with the withdrawing State, and to adopt standard clauses for that purpose.

**Background note 1: The Comprehensive Nuclear-Test-Ban Treaty**

1. The Comprehensive Nuclear-Test-Ban Treaty was an integral part of the 1995 decision to indefinitely extend the Non-Proliferation Treaty. Once in effect, it will provide the global community a permanent, non-discriminatory and legally binding commitment to end nuclear weapon testing and all other nuclear explosions. It constrains the development of nuclear weapons and their qualitative improvement, which combats both horizontal and vertical nuclear proliferation. The provisions of article V of the Non-Proliferation Treaty should be interpreted in that light.

2. Almost two decades after it was opened for signature, the Nuclear-Test-Ban Treaty has yet to enter into force. There has been progress in ratification and there are continued efforts to that end: the Nuclear-Test-Ban Treaty has now been signed by 183 States, of which 163 have ratified, including 36 whose ratification is necessary for its entry into force. Recalling the 2000 and 2010 Review Conferences, including the 2010 Action Plan, entry into force of the Nuclear-Test-Ban Treaty remains of the utmost urgency.

3. The eighth Comprehensive Nuclear-Test-Ban Treaty Ministerial Conference in September 2014 in New York confirmed the continuing commitment of the international community to the Nuclear-Test-Ban Treaty and highlighted the importance of its earliest possible entry into force. The eighth Article XIV Conference in New York in September 2015 provides an opportunity to reaffirm strong political support for the early entry into force of the Nuclear-Test-Ban Treaty.

4. Pending the entry into force of the Nuclear-Test-Ban Treaty, States should refrain from any action that would defeat its object and purpose. Development of new types of nuclear weapons, for example, may result in the resumption of tests and a lowering of the nuclear threshold. The existing moratorium on nuclear weapon test explosions and any other nuclear explosions must be maintained, but cannot serve as a substitute for ratifying the Nuclear-Test-Ban Treaty.

5. Only the Democratic People's Republic of Korea has acted contrary to the moratorium in the twenty-first century by conducting nuclear tests in 2006, 2009 and 2013. The tests, which undermine the international non-proliferation regimes and the object and purpose of the Nuclear-Test-Ban Treaty, were internationally condemned. The events further underlined the need for a universal and effective international monitoring and verification system for detecting nuclear explosions, and highlight the importance of bringing the Nuclear-Test-Ban Treaty into force as soon as possible.

6. The Preparatory Commission of the Comprehensive Nuclear-Test-Ban Treaty Organization is making progress in building a system to verify compliance with the Nuclear-Test-Ban Treaty at its entry into force. The goal of that work should be an effective, reliable, participatory and non-discriminatory verification system with global reach. All major components of the verification system, including the capability to conduct an on-site inspection, should be ready to meet the verification requirements of the Nuclear-Test-Ban Treaty by the time of its entry into force. The evaluation of the successfully implemented integrated field exercise in Jordan in 2014 should help strengthen the procedures and tools to conduct on-site inspections.

7. Extensive training courses and conferences contribute to enhanced awareness of the Nuclear-Test-Ban Treaty and help enable State signatories to fulfil their verification responsibilities and address possible technical, scientific and legal challenges. Since 2010, focused activities have been undertaken to build the capacity of experts from developing countries.

8. Data from the international monitoring and verification system should continue to be used for civil and scientific purposes, especially in the context of natural disasters and other emergency situations, including further cooperation with other international organizations in that regard.

**Background note 2: Compliance and verification**

1. Full compliance with all the provisions of the Treaty, including with relevant safeguards agreements, remains fundamentally important to its integrity. IAEA safeguards are fundamental to the nuclear non-proliferation regime and help create an environment conducive to nuclear cooperation.

2. Article III (1) of the Treaty requires non-nuclear-weapon States parties to accept safeguards on all source and special fissionable material in all peaceful nuclear activities. A State's comprehensive safeguards agreement, based on document INFCIRC/153 (Corrected), requires the State to account for and control all nuclear material subject to safeguards and to provide the required design information and reports to IAEA. IAEA, as the competent authority designated under article III, verifies the correctness and completeness of a State's declarations in order to provide assurances of the non-diversion of nuclear material from declared activities and of the absence of undeclared nuclear material and activities.

3. Credible assurances regarding the absence of undeclared nuclear material and activities require that a comprehensive safeguards agreement be complemented by an additional protocol based on document INFCIRC/540 (Corrected). Implementation of an additional protocol provides increased confidence about a State's compliance and is an integral part of the IAEA safeguards system. The combination of a comprehensive safeguards agreement and an additional protocol represents the verification standard pursuant to article III (1) of the Treaty. The comprehensive safeguards agreement and additional protocol together allow for the application of integrated safeguards. States that have brought into force an additional protocol may fully benefit from the increased efficiency under integrated safeguards as IAEA is able to draw a broader safeguards conclusion.

4. The 12 States parties which have not yet done so should conclude and implement comprehensive safeguards agreements. One hundred and forty-five States have signed an additional protocol and such protocols are in force for 124 states. Those States that have not yet done so should bring into force additional protocols without further delay, and all States should submit all nuclear material and activities, both current and future, to IAEA safeguards.

5. All States should cooperate fully with IAEA in implementing safeguards agreements and in expeditiously addressing anomalies, inconsistencies and questions identified by IAEA in order to assist IAEA in reaching its annual safeguards conclusions, which are of critical importance in assessing States' compliance with their Treaty obligations. IAEA should continue to make full use of all tools at its disposal to resolve safeguards issues.

6. In order to draw well-founded safeguards conclusions, IAEA needs to receive early design information, in accordance with the 1992 decision of the IAEA Board of Governors (GOV/2554/Attachment 2/Rev.2), including the need for all non-nuclear-weapon States parties to provide that information to the Agency on a timely basis.

7. States should undertake consultations with IAEA early in the design process for new nuclear facilities to ensure that aspects relevant to safeguards are taken into consideration in order to facilitate future safeguards implementation, from their initial planning stage through design, construction, operation and decommissioning.

8. Any State party which does not comply with its safeguards obligations under the Treaty isolates itself through its own actions from the benefits of constructive international relationships and from the benefits which accrue from adherence to the Treaty, including from cooperation in the peaceful uses of nuclear energy, until it enters into full compliance. The Group calls on those States that are currently non-compliant to move promptly to full compliance with their obligations, in particular:

(a) Democratic People's Republic of Korea: The country's nuclear weapons programme, including nuclear tests in 2006, 2009 and 2013, remains a serious challenge to the international nuclear non-proliferation regime. The country must comply with its Treaty obligations and allow for the return of IAEA inspectors and the reintroduction of IAEA safeguards;

(b) Islamic Republic of Iran: Serious concerns remain regarding the country's nuclear programme owing to its non-compliance with its Treaty safeguards agreement and the possible military dimensions of its nuclear programme.[1] While we welcome the Framework for Cooperation between IAEA and the Islamic Republic of Iran as an important step forward, we regret that the process, at the time of the present paper, has stalled. The Islamic Republic of Iran must cooperate fully with IAEA to address all outstanding issues regarding its nuclear programme. We welcome the continued implementation of the Joint Plan of Action, and the additional safeguards measures currently being implemented by IAEA under that agreement;

(c) Syrian Arab Republic: The finding by the IAEA Board of Governors in 2011 that the destroyed building at Dair Alzour was very likely a nuclear reactor remains of concern. The country's undeclared construction of a nuclear reactor and failure to provide design information for the facility constitutes non-compliance with its obligations under its Treaty safeguards agreement. The Syrian Arab Republic must remedy its non-compliance by cooperating fully with IAEA and providing full access to all sites and locations the Agency has requested.

9. The 1995 and 2010 Review Conferences confirmed that IAEA safeguards should be assessed and evaluated regularly. Decisions adopted by IAEA policy bodies aimed at further strengthening the effectiveness and improving the efficiency of IAEA safeguards should be supported and implemented.

10. Consideration of the State-level Concept by the 58th IAEA General Conference represents a move towards a more effective and efficient safeguards

[1] Identified in the annex to the November 2011 report of the Director General of IAEA (see GOV/2011/65).

systems that adheres fully to the principles of non-discriminatory, technical, objectives-based safeguards implementation.

**Background note 3: Export controls**

1. Export controls aim to ensure that nuclear trade for peaceful purposes does not contribute to the proliferation of nuclear weapons or other nuclear explosive devices, an unsafeguarded nuclear fuel cycle activity or acts of nuclear terrorism, and that international trade and cooperation in the nuclear field, under article IV of the Treaty, is not hindered unduly in the process. Nuclear export controls are a legitimate, necessary and desirable means of implementing the obligations of States parties under article III of the Treaty.

2. The existence of extensive covert networks for the procurement and the supply of sensitive nuclear equipment and technology underlines the need for all States to exercise vigilance in countering nuclear proliferation, including through the strict implementation of national nuclear export control policies.

3. There is a clear relationship between the non-proliferation obligations as set out in articles I, II and III of the Treaty and the objectives with regard to peaceful uses as set out in article IV of the Treaty. Nothing in the Treaty should be interpreted as affecting the inalienable right of all States parties to the Treaty to undertake research, production and use of nuclear energy for peaceful purposes, without discrimination and in conformity with articles I, II and III of the Treaty. Recipient States have an obligation to exercise appropriately stringent controls to prevent nuclear proliferation.

4. The understandings of the Zangger Committee (INFCIRC/209, as amended) provide important guidance to States parties in meeting their obligation under article III, paragraph 2, of the Treaty. They include a list of items triggering IAEA safeguards for exports to States not party to the Treaty.

5. The Nuclear Suppliers Group Guidelines (INFCIRC/254, as amended) play an important and useful role in the development of national export control policies and contribute to the international non-proliferation regime.

6. The list of items triggering IAEA safeguards and the procedures for implementing control of those items, in accordance with article III, paragraph 2, of the Treaty, should be reviewed from time to time so as to take into account advances in technology, proliferation sensitivity and changes in procurement practices. In that context, the completion of the fundamental review of the control lists by the Nuclear Suppliers Group is a welcome development.

7. Guidelines from export control regimes are finding increasing acceptance and application by national authorities, and the number of States participating in the regimes continues to grow. All States parties should consider the opportunities offered by the increasing adherence to export controls with a view to strengthening the global nuclear disarmament and non-proliferation regime.

8. In September 2008, a number of States parties participating in the Nuclear Suppliers Group granted an exception to India to the full-scope safeguards requirement in the Group's export control guidelines. The exemption was based on certain non-proliferation commitments and actions by India (see INFCIRC/734). Notwithstanding that decision, the principle remains important that new supply

arrangements for the transfer of source or special fissionable material, or equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to non-nuclear-weapon States should require, as a necessary precondition, the acceptance of full-scope IAEA safeguards and internationally legally binding commitments not to acquire nuclear weapons or other nuclear explosive devices.

9. All non-nuclear-weapon States parties to the Treaty have a legal obligation under article III of the Treaty to accept safeguards. As a comprehensive safeguards agreement together with an additional protocol represents the verification standard for Treaty safeguards, that verification standard should be acknowledged and applied as a condition for all new supply arrangements to non-nuclear-weapon States. The additional protocol further contains important provisions related to reporting to IAEA on the export and import of nuclear-related equipment.

10. Before supplying nuclear material, sensitive equipment or technology, States parties have the responsibility to seek assurance that the recipient State has in place an effective and adequate national regime of nuclear security. That regime comprises Treaty-related IAEA safeguards, an adequate system of physical protection, a minimum set of measures to combat illicit trafficking and rules and regulations for appropriate export controls in the case of retransfers.

**Background note 4: Cooperation in the peaceful uses of nuclear energy**

1. For the purposes of article IV of the Treaty, "nuclear energy" embraces both power and non-power applications. All States parties to the Treaty have an inalienable right to undertake research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I, II and III of the Treaty. States parties may choose individually not to exercise all their rights, or to exercise those rights collectively.

2. All States parties to the Treaty have undertaken to facilitate, and have the right to participate in, the fullest possible exchange of equipment, material, services and scientific and technological information for the peaceful uses of nuclear energy in a safe and secure environment.

3. Nuclear applications play an essential role in areas such as human health, water management, agriculture, food safety and nutrition, energy and environmental protection. Nuclear applications have made a considerable contribution to achieving the Millennium Development Goals, and the IAEA Technical Cooperation Programme plays an important role in that regard. The IAEA Peaceful Uses Initiative is a flexible and efficient instrument which provides additional, extra-budgetary contributions to that programme. The swift response by IAEA in helping to curtail the spread of the Ebola virus is an example of its ability to react to new challenges.

4. IAEA plays an essential role in assisting States parties in the peaceful uses of nuclear energy through the development of programmes aimed at improving their scientific, technological, research and regulatory capabilities. More than 140 countries take part in the IAEA Technical Cooperation Programme in pursuit of socioeconomic development. We welcome efforts of IAEA to enhance the effectiveness and efficiency of those activities. Close cooperation of IAEA;

international organizations, notably of the United Nations family; and States parties facilitates synergies and minimizes overlap.

5. The IAEA Medium-Term Strategy provides important strategic guidance for the Technical Cooperation Programme. On the basis of the Medium-Term Strategy, IAEA should identify priorities for each programme cycle. Continuing adherence to model project standards, expanded use of country programme frameworks and full payment of assessed voluntary contributions should be prerequisites for receipt of technical cooperation. IAEA should assign greater priority to the needs of developing countries, notably least developed countries, when planning its future activities. The post-2015 sustainable development agenda should also be taken into account in planning IAEA activities.

6. When developing nuclear energy, including nuclear power, it remains important to ensure that the use of nuclear energy is accompanied by commitments to and ongoing implementation of safeguards as well as the highest levels of safety and security, including at all stages of the nuclear fuel cycle. Legal instruments, standards and codes of conduct developed within the framework of IAEA to prevent and/or mitigate harmful effects of radiation on human safety and the environment are of great importance in that regard. When developing nuclear energy, it remains important to ensure that the technical and appropriate regulatory infrastructure and a skilled workforce as well as legislative framework and regulatory bodies are in place.

**Background note 5: Nuclear safety**

1. Safety in all activities throughout the nuclear fuel cycle is a prerequisite for the peaceful uses of nuclear energy. That requires continuous efforts to prevent complacency and ensure all elements of safety culture are maintained at the optimal level. Primary responsibility for the safety framework of nuclear installations rests with individual States, which have the crucial task of ensuring the necessary national technical, human and regulatory infrastructure is in place. That may require States to invest in education and training programmes and seek technical cooperation and assistance.

2. Although primary responsibility for the nuclear safety framework rests with individual States, international cooperation, especially that led by IAEA, is vital for the exchange of knowledge and learning from best practices. The international community has strengthened its focus on nuclear safety since the nuclear accident in 2011 at Fukushima, including through the Declaration of the IAEA Ministerial Conference on Nuclear Safety; the High-level Meeting on Nuclear Safety and Security, hosted by the Secretary-General; the IAEA General Conference-endorsed Action Plan on Nuclear Safety in 2011; and the Vienna Declaration on Nuclear Safety adopted by consensus at the diplomatic conference in February 2015. The strength of the Action Plan is, and will be, in its robust implementation as new lessons are learned and weaknesses are identified. The ultimate goal of the Action Plan is to strengthen nuclear safety worldwide, and the IAEA plays a central role in that regard. All States with nuclear facilities are encouraged to host IAEA review missions on a regular basis, as provided for by the Action Plan.

3. It is also important for States that have nuclear fuel cycle activities and radioactive material to become party to all relevant conventions and to make the

political commitments necessary to ensure a better global safety framework, including:

(a) The Convention on Nuclear Safety, which is of central importance for States operating, constructing or planning nuclear power reactors;

(b) The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, under which IAEA coordinates efforts to develop and implement disposal and long-term storage solutions for spent fuel and waste;

(c) The Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, which sets out a framework for international cooperation and response, involving IAEA, should such an event occur;

(d) The recommendations and conclusions of the IAEA International Action Plan for Strengthening the International Preparedness and Response System for Nuclear and Radiological Emergencies, which should be supported by continued efforts of the IAEA secretariat and member States to implement the strategy outlined in the final report of that Plan, particularly in the light of the Fukushima nuclear accident. The IAEA Incident and Emergency Centre serves as the IAEA focal point for responding to nuclear or radiological incidents and emergencies and for promoting improvement in emergency response and preparedness;

(e) The Code of Conduct on the Safety and Security of Radioactive Sources and its associated guidance, which provide international requirements for the regulatory control of radioactive sources;

(f) The various Conventions on civil liability for nuclear damage, which are important to ensure prompt compensation for damage;

(g) The Regulations for the Safe Transport of Radioactive Materials, which establish transport standards relating to the safety of persons, property and the environment.

4. International cooperation is important to enhance the safety of international transportation of radioactive materials, while respecting maritime and air navigation rights and freedoms under international law. It is in the interests of all States that maritime and other transportation of radioactive materials continue to be conducted in compliance with international standards of safety, security and environmental protection. The practice of some shipping States and operators of providing timely information and responses to relevant coastal States to address safety and security concerns, including in the event of an accident, through the use of agreed best practice guidelines for systematic communications, is a positive example of international cooperation in action.

5. The IAEA secretariat's implementation of the Plan of Activities on the Radiation Protection of the Environment remains important. There should be further cooperation between IAEA and relevant international organizations and stakeholders in promoting a coherent international policy regarding the radiological protection of the environment. The United Nations Scientific Committee on the Effects of Atomic Radiation continues to provide a valuable contribution by assessing and reporting levels and effects of exposure to ionizing radiation. Many

States rely on the Committee's estimates as the scientific basis for evaluating radiation risk and for establishing protective measures.

6. The IAEA International Expert Group on Nuclear Liability continues to undertake valuable work in examining the application and scope of the international nuclear liability regime and considering further specific actions to address any gaps in the scope and coverage of the regime. The Group should continue to address outstanding issues as provided for in the Action Plan and in the recommendations of the IAEA International Conference on the Safe and Secure Transport of Radioactive Materials held in 2011.

**Background note 6: Nuclear security**

1. Since the 2010 Review Conference, there has been growing international recognition of the vital importance of nuclear security and the responsibility of States to maintain at all times effective security of all nuclear and other radioactive materials, including nuclear materials used in nuclear weapons, and nuclear facilities under their control.

2. The strong international commitment to strengthening nuclear security worldwide has been demonstrated by a number of important events and initiatives, such as:

(a) The broad consensus behind the Ministerial Declaration at the International Conference on Nuclear Security convened by IAEA in 2013;

(b) Implementation of the Work Plan adopted by the 2010 Nuclear Security Summit, supported by a growing number of States, as evidenced by Nuclear Security Summits in 2012 and 2014;

(c) A number of initiatives aimed at supporting nuclear security, including the Global Partnership against the Spread of Nuclear Weapons and Materials of Mass Destruction, the Global Initiative to Combat Nuclear Terrorism and the Proliferation Security Initiative.

3. The central and essential role of IAEA in efforts to strengthen the global nuclear security framework by promoting its implementation and facilitating effective cooperation and coordination at the international and regional levels is recognized and actively supported by a growing number of States. In implementing its Nuclear Security Plan 2014-2017 and working towards the next International Conference, to be held at the ministerial level in 2016, IAEA can rely on the strong commitment to further improving nuclear security and strengthening its central role. There has also been a growing international recognition of the important role of nuclear industry in nuclear security, including by evaluating nuclear security regulations.

4. In order to further strengthen nuclear security worldwide, the following concrete measures are of vital importance:

(a) In line with the nuclear security fundamentals adopted by the IAEA Board of Governors, IAEA should continue to develop guidance through its Nuclear Security Series publications;

(b) Without altering the non-binding status of the IAEA Nuclear Security Series documents, States may commit themselves voluntarily and publicly to embed

the IAEA recommendations into national rules and regulations, following the initiative by a group of 35 countries (see INFCIRC/869);

(c) States should take full advantage of IAEA advisory services, including the IAEA International Physical Protection Advisory Service, the International Nuclear Security Advisory Service and through the establishment and implementation of Integrated Nuclear Security Support Plans;

(d) States that possess nuclear weapons are called on to undertake confidence-building measures that could include: voluntary declarations; reporting in national progress reports or within the framework of reports to the Security Council Committee established pursuant to resolution 1540 (2004); applying, where feasible and appropriate, best practices for civilian materials and military materials; or considering bilateral or internal peer reviews without jeopardizing sensitive information. Greater transparency would demonstrate the commitment of States with military materials to strengthening their nuclear security and contribute to greater domestic and international confidence. Sharing information and lessons learned can lead to improved security. Improved security also has a deterrent effect, sending a strong message to terrorists that military materials are secured to the highest possible standards;

(e) States that have not done so should become party to the Convention on the Physical Protection of Nuclear Material and ratify its 2005 amendment. All States parties should act in accordance with the object and purpose of this amendment until such time as it enters into force;

(f) States concerned should further minimize highly enriched uranium stocks and further minimize their use, including by converting radioisotope production to low-enriched uranium fuel and targets or by using other non-highly enriched uranium technologies, taking into account the need for an assured and reliable supply of medical isotopes;

(g) States concerned should keep their stockpiles of separated plutonium to the minimum consistent with their national requirements;

(h) States should reinforce their efforts to locate and secure nuclear and other radioactive material out of regulatory control and to improve existing control and cooperation mechanisms with a view to curbing illicit trafficking in nuclear and other radioactive materials. They should consider joining and supporting IAEA work regarding the prevention, detection and response to illicit trafficking;

(i) States should develop and enhance nuclear forensics capabilities and utilize, as appropriate, the support by IAEA, the Global Initiave to Combat Nuclear Terrorism and the International Technical Working Group on Nuclear Forensics in areas such as connecting and enhancing traditional and nuclear forensics capabilities and providing education and training assistance to States in that area;

(j) The work of IAEA in raising awareness of the potential impact on nuclear security of cyber-attacks, and the provision of guidance and assistance to its member States in that regard, should continue in view of the growing threat of such attacks;

(k) Fostering nuclear security culture through nuclear security education, training and proper certification of nuclear security managers should be a priority for States and their nuclear industries. In that regard, cooperation with IAEA in the

establishment of centres of excellence and other nuclear security training and support centres, as well as international nuclear security education networks, is essential;

(l) States are encouraged to consider participating in the Global Initiative to Combat Nuclear Terrorism, including at its next plenary meeting in Helsinki in June 2015, as well as in the ministerial-level International Conference on Nuclear Security to be held by IAEA in 2016;

(m) The outcomes of the Nuclear Security Summit 2014 should be followed up effectively, in view of the next Summit scheduled to be held in the United States of America in 2016, in order to reduce the threat of nuclear terrorism and to make the global nuclear security architecture as strong and comprehensive as possible.

**Background note 7: Withdrawal from the Non-Proliferation Treaty**

1. Article X of the Treaty confers on States parties the right of withdrawal from the Treaty. It sets out the reasons for which the right of withdrawal can be exercised, and the process for exercising it. But that right cannot be considered in isolation. It should be considered in the context of the integrity of the Treaty and the broader framework of international law, including the principle of customary international law that a State continues to be responsible for violations of legal obligations committed prior to its withdrawal from a treaty. Abuse of article X would undermine the integrity of the Treaty.

2. Withdrawal from the Treaty carries inherent risks to non-proliferation and could constitute a threat to international peace and security. Withdrawal from the Treaty is, of course, much broader than discussions in Vienna. Withdrawal is a significant political event and should be given urgent political attention by States parties. States parties held useful discussions on the issue of withdrawal at the 2010 Review Conference, which should be taken forward during the 2015 Review Conference, including by developing and agreeing on principles for exercising the right of withdrawal.

3. All nuclear materials, equipment, technology and facilities acquired and developed for peaceful purposes by a State during the time it was a party to the Treaty should, in the case of withdrawal, be restricted to peaceful uses only. As a consequence, they should remain subject to IAEA or fall-back safeguards.